Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of claims

Claim 1: (Previously presented) A method of automatically allocating additional hardware resources to a computer having a plurality of hardware resources, said method comprising:

monitoring use of selected ones of the hardware resources by the computer to obtain historical data pertaining to the historical availability to the computer of each of the monitored hardware resources;

automatically analyzing, according to an analysis technique specific to each selected one of the hardware resources, the obtained historical data to arrive at a prediction of a future level of availability of a monitored hardware resource;

providing a signal when the prediction of the future level of availability of the monitored hardware resource fails to meet an availability threshold; and

automatically updating the analysis technique based on said signal;

without user intervention, responding to the signal by automatically reserving or ordering an additional physical hardware resource that is not in the computer when the signal is provided and which is to be later manually physically added to the computer after the reserving or placing of an order.

Claim 2: (Previously presented) The method of claim 1 further comprising the step of:

performing at least one calculation with respect to certain of the obtained historical data.

Claim 3: (Previously presented) The method of claim 1 wherein said step of responding to the signal by automatically reserving or ordering occurs when the prediction indicates that the resources are below the availability threshold.

Claim 4: (Previously presented) The method of claim 1 further comprising the step of:

without user intervention, enabling the reduction of the monitored hardware resources when the prediction indicates that the monitored hardware resources will not be required.

Claim 5: (Cancelled)

Claim 6: (Previously presented) The method of claim 1 wherein the signal is in graphical form for each of the monitored hardware resources.

Claim 7: (Previously presented) The method of claim 1 wherein said step of analyzing comprises the step of:

analyzing available applications with respect to the utilization by the available applications of the monitored hardware resources.

Claim 8: (Previously presented) The method of claim 1 wherein the monitored hardware resources are selected from the set of resources, including memory, CPU, Disk, available ports, and network resources.

Claim 9: (Previously presented) A method of adjusting hardware resources in a computer having a plurality of the hardware resources, said method comprising:

monitoring use of selected ones of the hardware resources by the computer to obtain historical data pertaining to the historical availability to the computer of each the monitored hardware resource;

automatically analyzing, according to an analysis technique specific to each selected one of the hardware resources, said obtained historical data to provide a prediction of a future level of availability of the monitored hardware resource;

automatically updating the analysis technique; and

without user intervention, enabling an adjustment in resources when the prediction of the future level of availability of the monitored resource fails to meet an availability threshold.

Claim 10: (Previously presented) The method of claim 9 further comprising the step of:

performing at least one calculation with respect to certain of the obtained historical data.

Claim 11: (Previously presented) The method of claim 9 wherein said step of enabling comprises the step of:

adding the hardware resources to the computer from a remote location.

Claim 12: (Previously presented) The method of claim 9 wherein said step of enabling comprises the step of:

removing the hardware resources from the computer.

Claim 13: (Previously presented) The method of claim 9 wherein said step of monitoring comprises the step of:

storing historical data on resource usage.

Claim 14: (Previously presented) The method of claim 9 wherein said step of monitoring comprises the step of:

analyzing available applications with respect to the utilization by the available applications of the monitored hardware resources.

Claim 15: (Previously presented) A system for allocating additional hardware resources in a computer having a plurality of hardware resources said system comprising:

a monitoring unit monitoring use of selected ones of said hardware resources by the computer to obtain historical data pertaining to the historical availability to the computer of each said monitored hardware resource;

an analyzing unit automatically analyzing said obtained historical data to arrive at a prediction of a future level of availability of a monitored hardware resource, said analyzing unit capable of performing the analysis based on an analysis technique specific to each selected one of said hardware resources;

a signal providing unit providing a signal when said prediction of the future level of availability of the monitored resource fails to meet an availability threshold; and

without user intervention, responding to the signal by automatically allocating an additional hardware resource to be manually physically added to the computer,

wherein said analyzing unit is capable of automatically modifying said analysis technique based on said signal.

Claim 16: (Previously presented) The system of claim 15 further comprising:

means for performing at least one calculation with respect to certain of said obtained historical data.

Claim 17: (Cancelled)

Claim 18: (Previously presented) The system of claim 15 further comprising:

a unit operable without user intervention capable of enabling the reduction of said monitored hardware resources under control of said signal when said prediction indicates that the monitored hardware resources are not required.

Claim 19: (Previously presented) The system of claim 15 further comprising:

means for storing historical data on resource usage.

Claim 20: (Previously presented) The system of claim 15 wherein said signal is in graphical form for each of said monitored hardware resources.

Claim 21: (Previously presented) The system of claim 15 further comprising:

means for analyzing all available applications with respect to the utilization by the available applications of the monitored hardware resources.

Claim 22: (Previously presented) The system of claim 15 wherein said monitored hardware resources are selected from a group consisting of memory, CPU, Network, Disk, available ports, and network resources.

Claim 23: (Previously presented) A system of allocating additional hardware resources in a computer having a plurality of hardware resources, said system comprising:

means for monitoring use of selected ones of said hardware resources by the computer to obtain historical data pertaining to the historical availability to the computer of each said monitored hardware resource;

means for automatically analyzing, according to an analysis technique specific to each selected one of said hardware resources, said obtained historical data to arrive at a prediction of a future level of availability of said monitored hardware resource;

means for automatically updating said analysis technique; and

without user intervention, means for enabling an adjustment in said monitored hardware resources when said prediction of the future level of availability of said monitored hardware resource fails to meet an availability threshold.

Claim 24: (Previously presented) The system of claim 23 further comprising:

means for performing at least one calculation with respect to certain of said obtained historical data.

Claim 25: (Previously presented) The system of claim 23 wherein said means for enabling comprises:

means for adding resources to the computer from a remote location.

Claim 26: (Previously presented) The system of claim 23 wherein said means for enabling comprises:

removing resources from the computer.

Claim 27: (Previously presented) The system of claim 23 wherein said means for monitoring comprises:

means for storing historical data on resource usage.

Claim 28: (Previously Presented) The system of claim 23 wherein said means for monitoring comprises:

means for analyzing all available applications with respect to the utilization by the available applications of the monitored hardware resources.

Claim 29: (Previously presented) A computer program product operational in conjunction with a processor for allocating additional hardware resources in a computer having a plurality of hardware resources, said product comprising:

a monitor monitoring use of selected ones of said hardware resources by the computer to obtain historical data pertaining to the historical availability to the computer of each said monitored hardware resource;

an analyzer automatically analyzing said obtained historical data to arrive at a prediction of a future level of availability of a monitored hardware resource, said analyzer capable of performing the analysis based on an analysis technique specific to each selected one of said hardware resources, said analyzer capable of automatically modifying said analysis technique; and

an adjusting unit operable without user intervention capable of automatically allocating for manual physical addition, resources according to the analyzing.

Claim 30: (Previously presented) The computer product of claim 29 further including:

a unit operable in cooperation with said analyzer performing at least one calculation with respect to certain of said obtained historical data.

Claim 31: (Previously presented) The computer product of claim 29 wherein said adjusting unit comprises:

means for adding resources to the computer from a remote location.

Claim 32: (Previously presented) The computer product of claim 29 wherein said adjusting unit comprises:

means for removing resources from the computer.

Claim 33: (Previously presented) The computer product of claim 29 wherein said analyzer is capable of storing historical data on resource usage.

Claim 34: (Withdrawn) A system for automatically predicting and correcting system resource problems comprising:

at least one network element having at least one resource;

a central management system capable of determining a polling interval, at least one network element identifier, at least one polling parameter, and at least one analysis technique, said central management system capable of requesting specific information relative to the at least one resource;

at least one polling gateway communicatively coupled with said at least one network element and said central management system;

said at least one polling gateway capable of receiving said polling interval, said at least one network element identifier, and said at least one polling parameter;

said at least one polling gateway capable of automatically periodically polling, according to the polling interval;

said at least one network element identified by said at least one network element identifier to obtain at least one value for said at least one polling parameter;

said at least one polling gateway is capable of parsing said at least one value to provide said specific information to said central management system;

wherein said central management system is capable of automatically receiving and processing said specific information from said polling gateway according to said at least one analysis technique;

wherein said analysis technique is capable of automatically predicting a resource problem with respect to said at least one resource, wherein said central management system is capable of automatically updating said at least one analysis technique based on said automatic predicting;

wherein said polling gateway is capable of correcting said resource problem based on said automatic predicting.

Claim 35: (Withdrawn) The system of claim 34 wherein said central management system is capable of determining a cost associated with correcting said resource problem.

Claim 36: (Withdrawn) The system of claim 34 wherein said at least one analysis technique is specific to a particular network element.